

From: [Wilson, Ashley](#)
To: [Wagner, Christine](#)
Cc: [Non-responsive based on revised scope](#); [Scurato, Jesse](#); [Van Reed, Paul](#)
Subject: Case# 48100, SDG# MC0AN9 - Validated Data for Shiloh Church Road Site
Date: Friday, April 26, 2019 1:22:00 PM
Attachments: [48100 MC0AN9 ltr.pdf](#)
[image001.png](#)
[48100 MC0AN9 DVR.pdf](#)
[48100 MC0AN9 SSR.pdf](#)
[EQUIS 1 48100 MC0AN9 VAL.xls](#)
[EQUIS 2 48100 MC0AN9 VAL.xls](#)
[EQUIS 3 48100 MC0AN9 VAL.xls](#)
[EQUIS 48100 MC0AN9 VAL.xls](#)

Christine Wagner
US EPA Region 3
1650 Arch Street
Philadelphia, PA 19103-2029

Christine,

Attached to this message you will find electronic files containing the validation report and validated data for Shiloh Church Road Site, Case# 48100, SDG# MC0AN9. The validation of this case was completed by the Region III Environmental Services Assistance Team (ESAT).

Please contact ESAT's RPO, Brandon McDonald by phone at 410-305-2607 or e-mail at McDonald.Brandon@epa.gov if additional assistance is needed.

TO # 0002 TDF # 0319029



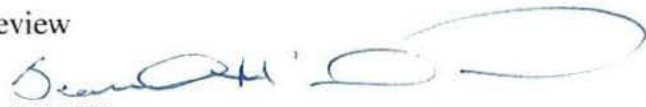
Ashley Wilson | Research Technician | 410-305-3013 | Wilson.Ashley@epa.gov
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UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION III
Environmental Sciences Center
701 Mapes Road
Fort Meade, Maryland 20755-5350

DATE: 4/25/2019

SUBJECT: Region III Data QA Review

FROM: Brandon McDonald 
Region III ESAT RPO (3EA22)

TO: CHRIS WAGNER
Hazardous Site Cleanup Division (HSCD)

Attached is the data validation report for the SHILOH CHURCH ROAD SITE site for RAS# 48100; SDG# MC0AN9 completed by the Region III Environmental Services Assistance Team (ESAT) contractor, ICF International, under the direction of Region III EAID.

If you have any questions regarding this review, please call Brandon McDonald at (410) 305-2607 or you can call Eric Graybill at (410)-305-2665.

Attachment

cc: 

TO: #0002 TDF: #0319029

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ICF
ESAT Region 3
US Environmental Protection Agency Environmental Science Center
701 Mapes Road Ft. Meade, MD 20755-5350
Phone 410-305-3012

Date: March 21, 2019

To: Brandon McDonald
ESAT Region 3 Project Officer

From: [Redacted]
Validator

[Redacted]
Reviewer

Subject: Inorganic Data Validation (S4VEM)
Shiloh Church Road Site
48100 MCOAN9

Overview

This data package consisted of two (2) drinking water samples analyzed for total metals by ICP-MS and for mercury (Hg) by cold vapor atomic absorption technique.

Analyses were performed by Chemtech Consulting Group (CHM) according to Contract Laboratory Program (CLP) Statement of Work (SOW) ISM02.4.

Data were validated according to the National Functional Guidelines for Inorganic Superfund Methods Data Review and applicable USEPA Region 3 modifications. Electronic validation was performed by the Electronic Data eXchange & Evaluation System (EXES). The validation report has been assigned the Superfund Data Validation Level Stage_4_Validation_Electronic_Manual (S4VEM).

The following validation narrative is an evaluation of laboratory reported data based on the hardcopy data package received by Region 3 on March 6, 2019.

As sample MCOAN9 was pre-treatment in nature, it was not evaluated in relation to National Primary Drinking Water Regulations (NPDWRs).

No post-treatment drinking water sample in this SDG reported a result which exceeded the NPDWR Maximum Contaminant Levels (MCLs).

Summary

No significant data quality outliers or technical deficiencies were identified that would require rejection of sample results. Less significant data quality outliers requiring estimation of sample results were identified including, but not limited to, serial dilution percent difference and blank contamination as detailed below.

Minor Problem

The percent difference (%D) in the ICP serial dilution analysis was outside the control limit (>10%) for zinc (Zn). Detected concentrations for Zn are estimated and have been qualified "J".

Notes

Analytes detected below Contract Required Quantitation Limits (CRQLs) not attributed to blank contamination are estimated and have been qualified "J".

Copper (Cu), lead (Pb) and thallium (Tl) have been detected in laboratory blanks associated with the samples in this SDG. Samples which reported detected concentrations for these analytes less than the CRQL have been qualified "B" as reported.

Matrix spike, laboratory duplicate, and Laboratory Control Sample analyses were within control limits.

Glossary of Inorganic Data Qualifier Codes

Validation Qualifiers	In order of descending precedence. Only one of these qualifiers may apply to any result.
R	The data are unusable. The sample results are rejected due to serious deficiencies in meeting QC criteria. The analyte may or may not be present in the sample.
UJ	The analyte was analyzed for, but was not detected. The reported quantitation limit is approximate and may be inaccurate or imprecise.
U	The analyte was analyzed for, but was not detected above the level of the reported sample quantitation limit
B	The result is presumed a blank contaminant. This qualifier is used for drinking water samples only.
J	The result is an estimated quantity. The associated numerical value is the approximate concentration of the analyte in the sample.
J+	The result is an estimated quantity, but the result may be biased high.
J-	The result is an estimated quantity, but the result may be biased low.

Sample Summary Report

Project Name: SHILOH CHURCH ROAD SITE
Project

GroupID: 48100/EPW14030/MC0AN9

Lab Name: Chemtech Consulting Group

Sample Number: LCS325	Method: Metals by ICP-MS	Matrix: Water	MA Number:
Sample Location:	pH: 2	Sample Date:	Sample Time:
% Moisture:		% Solids:	

Analyte Name	Analyte Type	Validation Result	Validation Flag	Units	Lab Result	Lab Flag	Dilution Factor	Reportable	Validation Level
Aluminum	Spike	41.7		ug/L	41.7		1.0	YES	S4VEM
Antimony	Spike	3.5		ug/L	3.5		1.0	YES	S4VEM
Arsenic	Spike	1.8		ug/L	1.8		1.0	YES	S4VEM
Barium	Spike	18.9		ug/L	18.9		1.0	YES	S4VEM
Beryllium	Spike	2.0		ug/L	2.0		1.0	YES	S4VEM
Cadmium	Spike	1.8		ug/L	1.8		1.0	YES	S4VEM
Calcium	Spike	950		ug/L	950		1.0	YES	S4VEM
Chromium	Spike	4.0		ug/L	4.0		1.0	YES	S4VEM
Cobalt	Spike	2.0		ug/L	2.0		1.0	YES	S4VEM
Copper	Spike	4.2		ug/L	4.2		1.0	YES	S4VEM
Iron	Spike	372		ug/L	372		1.0	YES	S4VEM
Lead	Spike	1.9		ug/L	1.9		1.0	YES	S4VEM
Magnesium	Spike	1010		ug/L	1010		1.0	YES	S4VEM
Manganese	Spike	2.3		ug/L	2.3		1.0	YES	S4VEM
Nickel	Spike	2.3		ug/L	2.3		1.0	YES	S4VEM
Potassium	Spike	936		ug/L	936		1.0	YES	S4VEM
Selenium	Spike	10.5		ug/L	10.5		1.0	YES	S4VEM
Silver	Spike	2.1		ug/L	2.1		1.0	YES	S4VEM
Sodium	Spike	1030		ug/L	1030		1.0	YES	S4VEM
Thallium	Spike	1.8		ug/L	1.8		1.0	YES	S4VEM
Vanadium	Spike	10.4		ug/L	10.4		1.0	YES	S4VEM
Zinc	Spike	3.7		ug/L	3.7		1.0	YES	S4VEM

Sample Summary Report

Project Name: SHILOH CHURCH ROAD SITE
Project

GroupID: 48100/EPW14030/MC0AN9

Lab Name: Chemtech Consulting Group

Sample Number: MC0AN9	Method: Mercury by Cold Vapor	Matrix: Water	MA Number:
Sample Location: RW-015	pH: 2	Sample Date: 02/21/2019	Sample Time: 09:25:00
% Moisture:		% Solids:	

Analyte Name	Analyte Type	Validation Result	Validation Flag	Units	Lab Result	Lab Flag	Dilution Factor	Reportable	Validation Level
Mercury	Target	0.20	U	ug/L	0.20	U	1.0	YES	S4VEM

Sample Summary Report

Project Name: SHILOH CHURCH ROAD SITE
Project

GroupID: 48100/EPW14030/MC0AN9

Lab Name: Chemtech Consulting Group

Sample Number: MC0AN9	Method: Metals by ICP-MS	Matrix: Water	MA Number:
Sample Location: RW-015	pH: 2	Sample Date: 02/21/2019	Sample Time: 09:25:00
% Moisture:		% Solids:	

Analyte Name	Analyte Type	Validation Result	Validation Flag	Units	Lab Result	Lab Flag	Dilution Factor	Reportable	Validation Level
Aluminum	Target	10.1	J	ug/L	10.1	J	1.0	YES	S4VEM
Antimony	Target	2.0	U	ug/L	2.0	U	1.0	YES	S4VEM
Arsenic	Target	0.10	J	ug/L	0.10	J	1.0	YES	S4VEM
Barium	Target	24.9		ug/L	24.9		1.0	YES	S4VEM
Beryllium	Target	0.36	J	ug/L	0.36	J	1.0	YES	S4VEM
Cadmium	Target	1.0	U	ug/L	1.0	U	1.0	YES	S4VEM
Calcium	Target	5100		ug/L	5100		1.0	YES	S4VEM
Chromium	Target	2.0	U	ug/L	2.0	U	1.0	YES	S4VEM
Cobalt	Target	0.26	J	ug/L	0.26	J	1.0	YES	S4VEM
Copper	Target	5.3		ug/L	5.3		1.0	YES	S4VEM
Iron	Target	8490		ug/L	8490		1.0	YES	S4VEM
Lead	Target	2.9		ug/L	2.9		1.0	YES	S4VEM
Magnesium	Target	2520		ug/L	2520		1.0	YES	S4VEM
Manganese	Target	982		ug/L	982		1.0	YES	S4VEM
Nickel	Target	0.63	J	ug/L	0.63	J	1.0	YES	S4VEM
Potassium	Target	2560		ug/L	2560		1.0	YES	S4VEM
Selenium	Target	5.0	U	ug/L	5.0	U	1.0	YES	S4VEM
Silver	Target	1.0	U	ug/L	1.0	U	1.0	YES	S4VEM
Sodium	Target	7630		ug/L	7630		1.0	YES	S4VEM
Thallium	Target	0.060	JB	ug/L	0.060	J	1.0	YES	S4VEM
Vanadium	Target	5.0	U	ug/L	5.0	U	1.0	YES	S4VEM
Zinc	Target	61.5	J	ug/L	61.5	*	1.0	YES	S4VEM

Sample Summary Report

Project Name: SHILOH CHURCH ROAD SITE
Project

GroupID: 48100/EPW14030/MC0AN9

Lab Name: Chemtech Consulting Group

Sample Number: MC0AP0	Method: Mercury by Cold Vapor	Matrix: Water	MA Number:
Sample Location: RW-015	pH: 2	Sample Date: 02/21/2019	Sample Time: 09:34:00
% Moisture:		% Solids:	

Analyte Name	Analyte Type	Validation Result	Validation Flag	Units	Lab Result	Lab Flag	Dilution Factor	Reportable	Validation Level
Mercury	Target	0.20	U	ug/L	0.20	U	1.0	YES	S4VEM

Sample Summary Report

Project Name: SHILOH CHURCH ROAD SITE
Project

GroupID: 48100/EPW14030/MC0AN9

Lab Name: Chemtech Consulting Group

Sample Number: MC0AP0	Method: Metals by ICP-MS	Matrix: Water	MA Number:
Sample Location: RW-015	pH: 2	Sample Date: 02/21/2019	Sample Time: 09:34:00
% Moisture:		% Solids:	

Analyte Name	Analyte Type	Validation Result	Validation Flag	Units	Lab Result	Lab Flag	Dilution Factor	Reportable	Validation Level
Aluminum	Target	20.0	U	ug/L	20.0	U	1.0	YES	S4VEM
Antimony	Target	2.0	U	ug/L	2.0	U	1.0	YES	S4VEM
Arsenic	Target	0.10	J	ug/L	0.10	J	1.0	YES	S4VEM
Barium	Target	34.2		ug/L	34.2		1.0	YES	S4VEM
Beryllium	Target	1.0	U	ug/L	1.0	U	1.0	YES	S4VEM
Cadmium	Target	1.0	U	ug/L	1.0	U	1.0	YES	S4VEM
Calcium	Target	6060		ug/L	6060		1.0	YES	S4VEM
Chromium	Target	2.0	U	ug/L	2.0	U	1.0	YES	S4VEM
Cobalt	Target	0.36	J	ug/L	0.36	J	1.0	YES	S4VEM
Copper	Target	0.56	JB	ug/L	0.56	J	1.0	YES	S4VEM
Iron	Target	10400		ug/L	10400		1.0	YES	S4VEM
Lead	Target	0.10	JB	ug/L	0.10	J	1.0	YES	S4VEM
Magnesium	Target	5130		ug/L	5130		1.0	YES	S4VEM
Manganese	Target	1360		ug/L	1360		1.0	YES	S4VEM
Nickel	Target	1.4		ug/L	1.4		1.0	YES	S4VEM
Potassium	Target	2870		ug/L	2870		1.0	YES	S4VEM
Selenium	Target	5.0	U	ug/L	5.0	U	1.0	YES	S4VEM
Silver	Target	1.0	U	ug/L	1.0	U	1.0	YES	S4VEM
Sodium	Target	7460		ug/L	7460		1.0	YES	S4VEM
Thallium	Target	0.060	JB	ug/L	0.060	J	1.0	YES	S4VEM
Vanadium	Target	5.0	U	ug/L	5.0	U	1.0	YES	S4VEM
Zinc	Target	20.7	J	ug/L	20.7	*	1.0	YES	S4VEM

Sample Summary Report

Project Name: SHILOH CHURCH ROAD SITE
Project

GroupID: 48100/EPW14030/MC0AN9

Lab Name: Chemtech Consulting Group

Sample Number: MC0AP0D	Method: Mercury by Cold Vapor	Matrix: Water	MA Number:
Sample Location:	pH: 2	Sample Date: 02/21/2019	Sample Time: 09:34:00
% Moisture:		% Solids:	

Analyte Name	Analyte Type	Validation Result	Validation Flag	Units	Lab Result	Lab Flag	Dilution Factor	Reportable	Validation Level
Mercury	Target	0.20	U	ug/L	0.20	U	1.0	YES	S4VEM

Sample Summary Report

Project Name: SHILOH CHURCH ROAD SITE
Project

GroupID: 48100/EPW14030/MC0AN9

Lab Name: Chemtech Consulting Group

Sample Number: MC0AP0D	Method: Metals by ICP-MS	Matrix: Water	MA Number:
Sample Location:	pH: 2	Sample Date: 02/21/2019	Sample Time: 09:34:00
% Moisture:		% Solids:	

Analyte Name	Analyte Type	Validation Result	Validation Flag	Units	Lab Result	Lab Flag	Dilution Factor	Reportable	Validation Level
Aluminum	Target	20.0	U	ug/L	20.0	U	1.0	YES	S4VEM
Antimony	Target	2.0	U	ug/L	2.0	U	1.0	YES	S4VEM
Arsenic	Target	1.0	U	ug/L	1.0	U	1.0	YES	S4VEM
Barium	Target	34.3		ug/L	34.3		1.0	YES	S4VEM
Beryllium	Target	1.0	U	ug/L	1.0	U	1.0	YES	S4VEM
Cadmium	Target	1.0	U	ug/L	1.0	U	1.0	YES	S4VEM
Calcium	Target	5960		ug/L	5960		1.0	YES	S4VEM
Chromium	Target	2.0	U	ug/L	2.0	U	1.0	YES	S4VEM
Cobalt	Target	0.34	J	ug/L	0.34	J	1.0	YES	S4VEM
Copper	Target	0.59	J	ug/L	0.59	J	1.0	YES	S4VEM
Iron	Target	10600		ug/L	10600		1.0	YES	S4VEM
Lead	Target	0.090	J	ug/L	0.090	J	1.0	YES	S4VEM
Magnesium	Target	5150		ug/L	5150		1.0	YES	S4VEM
Manganese	Target	1380		ug/L	1380		1.0	YES	S4VEM
Nickel	Target	1.4		ug/L	1.4		1.0	YES	S4VEM
Potassium	Target	2920		ug/L	2920		1.0	YES	S4VEM
Selenium	Target	5.0	U	ug/L	5.0	U	1.0	YES	S4VEM
Silver	Target	1.0	U	ug/L	1.0	U	1.0	YES	S4VEM
Sodium	Target	7500		ug/L	7500		1.0	YES	S4VEM
Thallium	Target	0.050	J	ug/L	0.050	J	1.0	YES	S4VEM
Vanadium	Target	5.0	U	ug/L	5.0	U	1.0	YES	S4VEM
Zinc	Target	20.9		ug/L	20.9		1.0	YES	S4VEM

Sample Summary Report

Project Name: SHILOH CHURCH ROAD SITE
Project

GroupID: 48100/EPW14030/MC0AN9

Lab Name: Chemtech Consulting Group

Sample Number: MC0AP0L	Method: Metals by ICP-MS	Matrix: Water	MA Number:
Sample Location:	pH:	Sample Date:	Sample Time:
% Moisture:		% Solids:	

Analyte Name	Analyte Type	Validation Result	Validation Flag	Units	Lab Result	Lab Flag	Dilution Factor	Reportable	Validation Level
Aluminum	Target	100	U	ug/L	100	U	5.0	YES	S4VEM
Antimony	Target	10.0	U	ug/L	10.0	U	5.0	YES	S4VEM
Arsenic	Target	5.0	U	ug/L	5.0	U	5.0	YES	S4VEM
Barium	Target	33.3	J	ug/L	33.3	J	5.0	YES	S4VEM
Beryllium	Target	5.0	U	ug/L	5.0	U	5.0	YES	S4VEM
Cadmium	Target	5.0	U	ug/L	5.0	U	5.0	YES	S4VEM
Calcium	Target	5860		ug/L	5860		5.0	YES	S4VEM
Chromium	Target	0.70	J	ug/L	0.70	J	5.0	YES	S4VEM
Cobalt	Target	0.30	J	ug/L	0.30	J	5.0	YES	S4VEM
Copper	Target	1.1	J	ug/L	1.1	J	5.0	YES	S4VEM
Iron	Target	10500		ug/L	10500		5.0	YES	S4VEM
Lead	Target	5.0	U	ug/L	5.0	U	5.0	YES	S4VEM
Magnesium	Target	5040		ug/L	5040		5.0	YES	S4VEM
Manganese	Target	1350		ug/L	1350		5.0	YES	S4VEM
Nickel	Target	1.6	J	ug/L	1.6	J	5.0	YES	S4VEM
Potassium	Target	2870		ug/L	2870		5.0	YES	S4VEM
Selenium	Target	25.0	U	ug/L	25.0	U	5.0	YES	S4VEM
Silver	Target	5.0	U	ug/L	5.0	U	5.0	YES	S4VEM
Sodium	Target	7640		ug/L	7640		5.0	YES	S4VEM
Thallium	Target	0.35	J	ug/L	0.35	J	5.0	YES	S4VEM
Vanadium	Target	25.0	U	ug/L	25.0	U	5.0	YES	S4VEM
Zinc	Target	24.5		ug/L	24.5	*	5.0	YES	S4VEM

Sample Summary Report

Project Name: SHILOH CHURCH ROAD SITE
Project

GroupID: 48100/EPW14030/MC0AN9

Lab Name: Chemtech Consulting Group

Sample Number: MC0AP0S	Method: Mercury by Cold Vapor	Matrix: Water	MA Number:
Sample Location:	pH: 2	Sample Date: 02/21/2019	Sample Time: 09:34:00
% Moisture:		% Solids:	

Analyte Name	Analyte Type	Validation Result	Validation Flag	Units	Lab Result	Lab Flag	Dilution Factor	Reportable	Validation Level
Mercury	Spike	0.98		ug/L	0.98		1.0	YES	S4VEM

Sample Summary Report

Project Name: SHILOH CHURCH ROAD SITE
Project

GroupID: 48100/EPW14030/MC0AN9

Lab Name: Chemtech Consulting Group

Sample Number: MC0AP0S Method: Metals by ICP-MS Matrix: Water MA Number:
Sample Location: pH: 2 Sample Date: 02/21/2019 Sample Time: 09:34:00
% Moisture: % Solids:

Analyte Name	Analyte Type	Validation Result	Validation Flag	Units	Lab Result	Lab Flag	Dilution Factor	Reportable	Validation Level
Antimony	Spike	92.0		ug/L	92.0		1.0	YES	S4VEM
Arsenic	Spike	40.0		ug/L	40.0		1.0	YES	S4VEM
Barium	Spike	2110		ug/L	2110		1.0	YES	S4VEM
Beryllium	Spike	53.8		ug/L	53.8		1.0	YES	S4VEM
Cadmium	Spike	47.8		ug/L	47.8		1.0	YES	S4VEM
Chromium	Spike	221		ug/L	221		1.0	YES	S4VEM
Cobalt	Spike	554		ug/L	554		1.0	YES	S4VEM
Copper	Spike	285		ug/L	285		1.0	YES	S4VEM
Lead	Spike	18.8		ug/L	18.8		1.0	YES	S4VEM
Manganese	Spike	1940		ug/L	1940		1.0	YES	S4VEM
Nickel	Spike	572		ug/L	572		1.0	YES	S4VEM
Selenium	Spike	117		ug/L	117		1.0	YES	S4VEM
Silver	Spike	43.6		ug/L	43.6		1.0	YES	S4VEM
Thallium	Spike	46.1		ug/L	46.1		1.0	YES	S4VEM
Vanadium	Spike	539		ug/L	539		1.0	YES	S4VEM
Zinc	Spike	581		ug/L	581		1.0	YES	S4VEM

Sample Summary Report

Project Name: SHILOH CHURCH ROAD SITE
Project

GroupID: 48100/EPW14030/MC0AN9

Lab Name: Chemtech Consulting Group

Sample Number: PBW325	Method: Metals by ICP-MS	Matrix: Water	MA Number:
Sample Location:	pH: 2	Sample Date:	Sample Time:
% Moisture:		% Solids:	

Analyte Name	Analyte Type	Validation Result	Validation Flag	Units	Lab Result	Lab Flag	Dilution Factor	Reportable	Validation Level
Aluminum	Target	20.0	U	ug/L	20.0	U	1.0	YES	S4VEM
Antimony	Target	2.0	U	ug/L	2.0	U	1.0	YES	S4VEM
Arsenic	Target	1.0	U	ug/L	1.0	U	1.0	YES	S4VEM
Barium	Target	10.0	U	ug/L	10.0	U	1.0	YES	S4VEM
Beryllium	Target	1.0	U	ug/L	1.0	U	1.0	YES	S4VEM
Cadmium	Target	1.0	U	ug/L	1.0	U	1.0	YES	S4VEM
Calcium	Target	44.1	J	ug/L	44.1	J	1.0	YES	S4VEM
Chromium	Target	0.19	J	ug/L	0.19	J	1.0	YES	S4VEM
Cobalt	Target	1.0	U	ug/L	1.0	U	1.0	YES	S4VEM
Copper	Target	0.18	J	ug/L	0.18	J	1.0	YES	S4VEM
Iron	Target	200	U	ug/L	200	U	1.0	YES	S4VEM
Lead	Target	0.12	J	ug/L	0.12	J	1.0	YES	S4VEM
Magnesium	Target	500	U	ug/L	500	U	1.0	YES	S4VEM
Manganese	Target	0.20	J	ug/L	0.20	J	1.0	YES	S4VEM
Nickel	Target	1.0	U	ug/L	1.0	U	1.0	YES	S4VEM
Potassium	Target	500	U	ug/L	500	U	1.0	YES	S4VEM
Selenium	Target	5.0	U	ug/L	5.0	U	1.0	YES	S4VEM
Silver	Target	1.0	U	ug/L	1.0	U	1.0	YES	S4VEM
Sodium	Target	70.9	J	ug/L	70.9	J	1.0	YES	S4VEM
Thallium	Target	0.070	J	ug/L	0.070	J	1.0	YES	S4VEM
Vanadium	Target	5.0	U	ug/L	5.0	U	1.0	YES	S4VEM
Zinc	Target	0.57	J	ug/L	0.57	J	1.0	YES	S4VEM

Sample Summary Report

Project Name: SHILOH CHURCH ROAD SITE Project	GroupID: 48100/EPW14030/MC0AN9	Lab Name: Chemtech Consulting Group
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Sample Number: PBW379	Method: Mercury by Cold Vapor	Matrix: Water	MA Number:
Sample Location:	pH: 2	Sample Date:	Sample Time:
% Moisture:		% Solids:	

Analyte Name	Analyte Type	Validation Result	Validation Flag	Units	Lab Result	Lab Flag	Dilution Factor	Reportable	Validation Level
Mercury	Target	0.20	U	ug/L	0.20	U	1.0	YES	S4VEM

Sample Summary Report

Project Name: SHILOH CHURCH ROAD SITE
Project

GroupID: 48100/EPW14030/MC0AN9

Lab Name: Chemtech Consulting Group

Items/Reason	Relinquished by (Signature and Organization)	Date/Time	Received by (Signature and Organization)	Date/Time	Sample Condition Upon Receipt



US EPA Region 3 Analytical Request (ARF) Report

CT Number: CT8616

Date Receipt: 02/06/2019

Sample(s) Shipping Dates

Start: 02/11/2019

End: 02/22/2019

ARF Status: COMPLETE

Site: SHILOH CHURCH ROAD SITE

Site Activity: REMOVAL ASSESSMENT (RS)

Program: SUPERFUND (RAS AND/OR DAS)

Street:

City: NATHALIE

State: VA Zip: 24577

Account No: 2018-T-03-N-303DC6-A38Q-RS-00

SPILL ID: A38Q

OPERABLE UNIT: 00

EPA ID (aka CERCLIS):

QA Title:

QA Date Approved:

EPA Project Lead:	CHRIS WAGNER	Phone: 804-698-4164	Cell Phone #: - -	E-mail: WAGNER.CHRISTINE@EPA.GOV
Site Leader:	Non-responsive based on revised scope	Phone: Non-responsive based on rev	Cell Phone #: Non-responsive based on rev	E-mail: Non-responsive based on revised scope
Request Preparer:	Non-responsive based on revised scope	Phone: - -	Cell Phone #: Non-responsive based on rev	E-mail: Non-responsive based on revised scope
Contractor:	EPA CO/PO:			Equivalent method substitution allowed: <u>YES</u>

Special Instructions:

4 X 6-L BATCH CERTIFIED SUMMA CANISTERS EQUIPPED WITH 8-HOUR FLOW CONTROLLERS, AND 1 T-SPLITTER ARE REQUESTED IF EPA'S LAB CAN ACCEPT THE SAMPLES, THE FIELD TEAM LEAD WILL BE AVAILABLE TO PICK UP THE CANISTERS FROM FORT MEADE RESULTS FOR THE TO-15 ANALYSIS SHOULD BE REPORTED IN PPBV AS WELL AS UG/M3

Comments:

CONSIDERATIONS FOR TO-15 FROM NAOMI REID:•OASQA/ESAT WILL REPORT M AND P XYLENES WHICH ARE NOT SEPARATED, AS A TOTAL OF BOTH ISOMERS AT 1PPBV AND O-XYLENE WILL BE REPORTED SEPARATELY

•METHY ACETATE, 1, 2-DIBROMO-3-CHLOROPROPANE, METHYLCYCLOHEXANE, AND CUMENE [ISOPROPYLBENZENE] WILL BE REPORTED AS TENTATIVELY IDENTIFIED COMPOUNDS (TICS) IF DETECTED THESE COMPOUNDS ARE NOT IN THE CURRENT CALIBRATION MIX

•BROMOCHLOROMETHANE IS IN THE REQUESTED ANALYTE LIST IT IS USED IN METHOD TO-15 AS AN INTERNAL STANDARD AND THEREFORE, CANNOT BE REPORTED AS AN ANALYTE OF INTEREST

RESPONSE FROM CHRIS WAGNER ON 2/12/19 WAS ACCEPTABLE ((KP)) 2/12/19

DAS	RAS	Lab Assigned	QTY	Matrix	Parameter	Requested Method	Accepted Method	Validation Level	Unvalidated Data Due	Final Report Due	EDD Required
R35511		OASQA ESAT	4	AIR (SUMMA CANISTER)	VOLATILE ORGANIC COMPOUNDS (VOC)	TO-15	TO-15	M3	21	45	Y
	48100	CHEM	6	DRINKING WATER	VOLATILE ORGANIC COMPOUNDS (VOC) TRACE	SOM02 4	SOM02 4	M3	21	45	Y
	48100	CHEM	2	DRINKING WATER	METALS (TOTAL)	ISM02 4 ICP-MS	ISM02 4 ICP-MS	IM2	21	45	Y
	48100	CHEM	2	DRINKING WATER	MERCURY (TOTAL)	ISM02 4	ISM02 4	IM2	21	45	Y

ESAT DATA VALIDATION EVALUATION CHECKLIST
Contract # EP-W-13-023

TDF #: 0319029	Revision: 0	Case #: 48100	SDG: MC0AN9
Site Name: Shiloh Church Road Site			
Parameter(s): ICP-MS, Mercury			
Method(s): ISM02.4			
Laboratory: CHM			
Reviewer: Non-responsive based on revised scope		Date Submitted to EPA:	
EPA RPM/OSC: Christine Wagner		Number of hours spent on review:	
cc: Non-responsive based on revised scope (Weston)		Number of Samples/Aliquots: 2 / 4	
Validation Level/Stage: IM2/S4VEM		EDD: YES	

<u>CRITERIA</u>	<u>YES</u>	<u>NO</u>	<u>COMMENTS</u>
Format according to Region III protocol	_____	_____	_____
Clarity of report	_____	_____	_____
Qualifiers applied correctly	_____	_____	_____
Consistency between narrative and data summary form(s)	_____	_____	_____
Error-free transcription	_____	_____	_____

<u>EFFICIENCY OF CONTRACTOR</u>			
Approval recommended for current submission	_____	_____	_____
Time spent on review is reasonable	_____	_____	_____
Technical Evaluation	_____	_____	_____
			EPA Oversight

<u>ESD OVERSIGHT DATES</u>	<u>TPO</u>	<u>Oversight</u>	<u>ESAT</u>
Received at EPA	_____		
Oversight assigned	_____		
Oversight received		_____	
Oversight completed		_____	
Feedback given	_____		
Mailed to RPM			_____

Task Order #: 0002	TDF #: 0319029	Revision #: 0	Case/DAS #: 48100
Site Name: Shiloh Church Road Site			SDG #: MCOAN9
Analysis Type: ICP-MS, Hg		SOW #: ISM02.4	
Reviewer: Non-responsive based on review			
CLP Laboratory Code: CHM			

Data Validation Checklist – General

Peer Reviewer: _____ Due Date: 4/30/19

CRITERIA	CHECK	COMMENTS
EPA Oversight Checklist		
TDF #	<input type="checkbox"/>	
Case #	<input type="checkbox"/>	
SDG #	<input type="checkbox"/>	
Site Name	<input type="checkbox"/>	
Laboratory	<input type="checkbox"/>	
EPA OSC/RPM	<input type="checkbox"/>	
Validation Type	<input type="checkbox"/>	
Narrative		
Report Header	<input type="checkbox"/>	
Report Footer	<input type="checkbox"/>	
Overview		
Laboratory	<input type="checkbox"/>	
Analytical method	<input type="checkbox"/>	
Analytical services program	<input type="checkbox"/>	
NFG reference	<input type="checkbox"/>	
Validation level	<input type="checkbox"/>	
Data package receipt date	<input type="checkbox"/>	
Criteria		
Qualifier list	<input type="checkbox"/>	
Appendix A		
Regional COC	<input type="checkbox"/>	
EPA ARF	<input type="checkbox"/>	
Appendix B		
Laboratory narrative	<input type="checkbox"/>	
Appendix C		
EXES report	<input type="checkbox"/>	

General Comments:

Peer Reviewed By: _____ Date: _____

Task Order #: 0002	TDF #: 0319029	Revision #: 0	Case/DAS #: 48100
Site Name: Shiloh Church Road Site			SDG #: MC0AN9
Analysis Type: ICP-MS, Hg		SOW #: ISM02.4	
Reviewer: <div>Non-responsive based on review</div>			
CLP Laboratory Code: CHM			

Technical-Inorganics

Section	Check	Comments
Overview	<input type="checkbox"/>	
Matrix and # of samples	<input type="checkbox"/>	
Field QC samples	<input type="checkbox"/>	
Summary	<input type="checkbox"/>	
Major problems	<input type="checkbox"/>	
Minor problems	<input type="checkbox"/>	
Notes	<input type="checkbox"/>	
Compounds below CRQL	<input type="checkbox"/>	
Blank contaminants	<input type="checkbox"/>	
Field Duplicates	<input type="checkbox"/>	
Field/Rinsate Blanks	<input type="checkbox"/>	
Dilutions	<input type="checkbox"/>	
SSRs/Form Is	<input type="checkbox"/>	
EDD	<input type="checkbox"/>	

DV Item	Check	Qualifier Applied	Comments
Preservation/Holding Time	<input type="checkbox"/>		
Instrument Performance Check	<input type="checkbox"/>		
Calibration	<input type="checkbox"/>		
Blanks	<input type="checkbox"/>		
Interference Check Sample	<input type="checkbox"/>		
Serial Dilution	<input type="checkbox"/>		
Lab Duplicate	<input type="checkbox"/>		
MS/MSDs/PDS	<input type="checkbox"/>		
LCS/LCSDs	<input type="checkbox"/>		
Internal Standards	<input type="checkbox"/>		
Other	<input type="checkbox"/>		

General Comments:

Peer Reviewed By: _____ Date: _____

Data Validation Report

Data Review Results

Project Name: SHILOH CHURCH ROAD SITE Project	GroupID: 48100/EPW14030/MC0AN9	Lab Name: Chemtech Consulting Group
Submission Group Id: 31144074	Organization: EPA Region 3	SOW: ISM02.4

HoldingTimes_Preservation

NONE FOUND

Accurate

Data Validation Report

Data Review Results

Project Name: SHILOH CHURCH ROAD SITE Project	GroupID: 48100/EPW14030/MC0AN9	Lab Name: Chemtech Consulting Group
Submission Group Id: 31144074	Organization: EPA Region 3	SOW: ISM02.4

TUNE

NONE FOUND

Accurate

Data Validation Report
Data Review Results

Project Name: SHILOH CHURCH ROAD SITE Project	GroupID: 48100/EPW14030/MC0AN9	Lab Name: Chemtech Consulting Group
Submission Group Id: 31144074	Organization: EPA Region 3	SOW: ISM02.4

InitialCalibration

NONE FOUND

Accurate

Data Validation Report
Data Review Results

Project Name: SHILOH CHURCH ROAD SITE Project	GroupID: 48100/EPW14030/MC0AN9	Lab Name: Chemtech Consulting Group
Submission Group Id: 31144074	Organization: EPA Region 3	SOW: ISM02.4

ContinuingCalibrationVerification

NONE FOUND

Accurate

Data Validation Report

Data Review Results

Project Name: SHILOH CHURCH ROAD SITE Project	GroupID: 48100/EPW14030/MC0AN9	Lab Name: Chemtech Consulting Group
Submission Group Id: 31144074	Organization: EPA Region 3	SOW: ISM02.4

InitialCalibrationVerification

NONE FOUND

Accurate

Data Review Results

Tue, 12
Mar
2019
14:54:58

Project Name: SHILOH CHURCH ROAD SITE Project

GroupID: 48100/EPW14030/MC0AN9

Lab Name: Chemtech Consulting Group

Submission Group Id: 31144074

Organization: EPA Region 3

SOW: ISM02.4

Blanks

Method - Metals by ICP-MS

Test Name: EXES-1342

Defect Message: The following samples have analyte results less than or equal to CRQLs. The associated CCB analyte results are less than or equal to CRQLs. Detects are qualified as U. Sample results are reported at CRQLs. - Drinking water samples – have been qualified “B” as reported

Associated Samples: MC0AN9, MC0AP0

Defective Analyte	Defective Samples/Analyses
Copper	MC0AP0
Lead	MC0AP0
Thallium	MC0AN9, MC0AP0

Test Name: EXES-476

Defect Message: The following samples have analyte results less than or equal to CRQLs. The associated ICB analyte results are less than or equal to CRQLs. Detects are qualified as U. Sample results are reported at CRQLs. Data not qualified due to ICBs

Associated Samples: MC0AP0

Defective Analyte	Defective Samples/Analyses
Copper	MC0AP0
Lead	MC0AP0

Test Name: EXES-478

Defect Message: The following samples have analyte results greater than CRQLs. The associated ICB analyte results are less than or equal to CRQLs. Use Professional Judgement to qualify detects. Data not qualified due to ICBs

Associated Samples: LCS325, MC0AN9, MC0AP0, MC0AP0D, MC0AP0L, MC0AP0S

Defective Analyte	Defective Samples/Analyses
Antimony	LCS325, MC0AP0S
Calcium	LCS325, MC0AN9, MC0AP0, MC0AP0D, MC0AP0L
Copper	LCS325, MC0AN9, MC0AP0S
Lead	LCS325, MC0AN9, MC0AP0S

Data Review Results

Tue, 12
Mar
2019
14:54:58

Project Name: SHILOH CHURCH ROAD SITE Project

GroupID: 48100/EPW14030/MC0AN9

Lab Name: Chemtech Consulting Group

Submission Group Id: 31144074

Organization: EPA Region 3

SOW: ISM02.4

Test Name: EXES-478

Defect Message: The following samples have analyte results greater than CRQLs. The associated ICB analyte results are less than or equal to CRQLs. Use Professional Judgement to qualify detects. **Data not qualified due to ICBs**

Associated Samples: LCS325, MC0AN9, MC0AP0, MC0AP0D, MC0AP0L, MC0AP0S

Defective Analyte	Defective Samples/Analyses
Potassium	LCS325, MC0AN9, MC0AP0, MC0AP0D, MC0AP0L
Silver	LCS325, MC0AP0S
Sodium	LCS325, MC0AN9, MC0AP0, MC0AP0D, MC0AP0L

Test Name: EXES-479

Defect Message: The following samples have analyte results greater than CRQLs. The associated CCB analyte results are less than or equal to CRQLs. Use Professional Judgement to qualify detects. **No Impact**

Associated Samples: LCS325, MC0AN9, MC0AP0, MC0AP0D, MC0AP0L, MC0AP0S

Defective Analyte	Defective Samples/Analyses
Antimony	LCS325, MC0AP0S
Calcium	LCS325, MC0AN9, MC0AP0, MC0AP0D, MC0AP0L
Copper	LCS325, MC0AN9, MC0AP0S
Lead	LCS325, MC0AN9, MC0AP0S
Sodium	LCS325, MC0AN9, MC0AP0, MC0AP0D, MC0AP0L
Thallium	LCS325, MC0AP0S

Test Name: EXES-506

Defect Message: The following samples have analyte results less than or equal to CRQLs. The associated PB analyte results are less than or equal to CRQLs. Detects are qualified as U. Sample results are reported at CRQLs. **- Drinking water samples – have been qualified “B” as reported**

Associated Samples: MC0AN9, MC0AP0

Defective Analyte	Defective Samples/Analyses
Copper	MC0AP0
Lead	MC0AP0
Thallium	MC0AN9, MC0AP0

Data Review Results

Tue, 12
Mar
2019
14:54:58

Project Name: SHILOH CHURCH ROAD SITE Project

GroupID: 48100/EPW14030/MC0AN9

Lab Name: Chemtech Consulting Group

Submission Group Id: 31144074

Organization: EPA Region 3

SOW: ISM02.4

Test Name: EXES-508**Defect Message: The following samples have analyte results greater than CRQLs. The associated PB analyte results are less than or equal to CRQLs. Use Professional Judgement to qualify detects. No Impact****Associated Samples: MC0AN9, MC0AP0**

Defective Analyte	Defective Samples/Analyses
Calcium	MC0AN9, MC0AP0
Copper	MC0AN9
Lead	MC0AN9
Manganese	MC0AN9, MC0AP0
Sodium	MC0AN9, MC0AP0
Zinc	MC0AN9, MC0AP0

Data Validation Report
Data Review Results

Project Name: SHILOH CHURCH ROAD SITE Project	GroupID: 48100/EPW14030/MC0AN9	Lab Name: Chemtech Consulting Group
Submission Group Id: 31144074	Organization: EPA Region 3	SOW: ISM02.4

InterferenceCheckSample

NONE FOUND

Accurate

Data Validation Report

Data Review Results

Project Name: SHILOH CHURCH ROAD SITE Project	GroupID: 48100/EPW14030/MC0AN9	Lab Name: Chemtech Consulting Group
Submission Group Id: 31144074	Organization: EPA Region 3	SOW: ISM02.4

LaboratoryControlSample

NONE FOUND

Accurate

Data Validation Report
Data Review Results

Project Name: SHILOH CHURCH ROAD SITE Project	GroupID: 48100/EPW14030/MC0AN9	Lab Name: Chemtech Consulting Group
Submission Group Id: 31144074	Organization: EPA Region 3	SOW: ISM02.4

MatrixSpikes

NONE FOUND

Accurate

Data Validation Report

Data Review Results

Project Name: SHILOH CHURCH ROAD SITE Project	GroupID: 48100/EPW14030/MC0AN9	Lab Name: Chemtech Consulting Group
Submission Group Id: 31144074	Organization: EPA Region 3	SOW: ISM02.4

SerialDilution

Method - Metals by ICP-MS

Test Name: EXES-1334	
Defect Message: The following samples are associated to the Serial Dilution sample with analyte %D >10% and the original sample result is > 50xMDL. Detects are qualified as estimated J. Non-detects are qualified estimated UJ.	
Associated Samples: MC0AN9, MC0AP0	
Defective Analyte	Defective Samples/Analyses
Zinc	MC0AP0L

Data Validation Report
Data Review Results

Project Name: SHILOH CHURCH ROAD SITE Project	GroupID: 48100/EPW14030/MC0AN9	Lab Name: Chemtech Consulting Group
Submission Group Id: 31144074	Organization: EPA Region 3	SOW: ISM02.4

InternalStandard

NONE FOUND

Accurate

Data Review Results

Tue, 12
Mar
2019
14:54:58

Project Name: SHILOH CHURCH ROAD SITE Project

GroupID: 48100/EPW14030/MC0AN9

Lab Name: Chemtech Consulting Group

Submission Group Id: 31144074

Organization: EPA Region 3

SOW: ISM02.4

TargetAnalyteQuantitation

Method - Metals by ICP-MS

Test Name: EXES-790

Defect Message: The following samples have analyte results greater than or equal to detection limit (MDL) and below quantitation limit (CRQL). Detects are qualified as estimated J.

Associated Samples: MC0AN9, MC0AP0, MC0AP0D, MC0AP0L, PBW325

Defective Analyte	Defective Samples/Analyses
Aluminum	MC0AN9
Arsenic	MC0AN9, MC0AP0
Barium	MC0AP0L
Beryllium	MC0AN9
Calcium	PBW325
Chromium	MC0AP0L, PBW325
Cobalt	MC0AN9, MC0AP0, MC0AP0D, MC0AP0L
Copper	MC0AP0, MC0AP0D, MC0AP0L, PBW325
Lead	MC0AP0, MC0AP0D, PBW325
Manganese	PBW325
Nickel	MC0AN9, MC0AP0L
Sodium	PBW325
Thallium	MC0AN9, MC0AP0, MC0AP0D, MC0AP0L, PBW325
Zinc	PBW325

Accurate

Data Validation Report
Data Review Results

Project Name: SHILOH CHURCH ROAD SITE Project	GroupID: 48100/EPW14030/MC0AN9	Lab Name: Chemtech Consulting Group
Submission Group Id: 31144074	Organization: EPA Region 3	SOW: ISM02.4

Duplicates

NONE FOUND

Accurate

Data Review Results

Tue, 12
Mar
2019
14:54:58

Project Name: SHILOH CHURCH ROAD SITE Project

GroupID: 48100/EPW14030/MC0AN9

Lab Name: Chemtech Consulting Group

Submission Group Id: 31144074

Organization: EPA Region 3

SOW: ISM02.4

SampleAnalysis

Method - Metals by ICP-MS

Test Name: EXES-866

Defect Message: The following ICV/ICB and CCV/CCB have the incorrect ResultType under the Analyte node. Detects are not qualified.

Associated Samples:

Defective Analyte	Defective Samples/Analyses
Aluminum	CCB093, CCB094, CCB095, LB100983ICB
Arsenic	CCB093, CCB094, CCB095, LB100983ICB
Barium	CCB093, CCB094, CCB095, LB100983ICB
Beryllium	CCB093, CCB094, CCB095, LB100983ICB
Cadmium	CCB093, CCB094, CCB095, LB100983ICB
Chromium	CCB094, CCB095, LB100983ICB
Cobalt	CCB093, CCB094, CCB095, LB100983ICB
Iron	CCB093, CCB094, CCB095, LB100983ICB
Magnesium	CCB093, CCB094, CCB095, LB100983ICB
Manganese	CCB093, CCB094, CCB095, LB100983ICB
Nickel	CCB093, CCB094, CCB095, LB100983ICB
Potassium	CCB094, CCB095
Selenium	CCB093, CCB094, CCB095, LB100983ICB
Silver	CCB094, CCB095
Thallium	LB100983ICB
Vanadium	CCB093, CCB094, CCB095, LB100983ICB
Zinc	CCB093, CCB094, CCB095, LB100983ICB

does not impact sample data

Data Validation Report

Data Review Results

Project Name: SHILOH CHURCH ROAD SITE Project	GroupID: 48100/EPW14030/MC0AN9	Lab Name: Chemtech Consulting Group
Submission Group Id: 31144074	Organization: EPA Region 3	SOW: ISM02.4

Method - Mercury by Cold Vapor

Test Name: EXES-866	
Defect Message: The following ICV/ICB and CCV/CCB have the incorrect ResultType under the Analyte node. Detects are not qualified.	
Associated Samples:	
Defective Analyte	Defective Samples/Analyses
Mercury	CCB027, CCB028, LB101029ICB

does not impact sample data